What is claimed is:

1. A radio frequency identification (RFID) reader for preventing data collision in an RFID tag system, the RFID reader comprising:

a transferring unit, wherein the transferring unit includes:

a carrier signal generator for generating a carrier signal determined by electromagnetic field strength defining a tag read range;

a carrier signal amplifier for amplifying the carrier signal from the carrier signal generator; and

a gap signal generator for generating a non-transfer period;

a receiving unit, wherein the receiving unit includes:

an amplitude detector for detecting an amplitude of a read data stream;

a filtering and amplifying unit for filtering and amplifying the detected amplitude from the amplitude detector; and

a signal collision detector receiving an output of the filtering and amplifying unit for detecting data collision;

a data decoder; and

an antenna coil.

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2.   A radio frequency identification (RFID) tag for preventing data collision in an RFID tag system, the RFID tag comprising:

an antenna matched to a resonance frequency; and

an integrated circuit electrically coupled to the antenna.

3.   The RFID tag as recited in claim 2, wherein the integrated circuit includes:

a memory for storing data; and

a timer for generating a non-transfer period.

4. A method for preventing data collision in a radio frequency identification (RFID) system, the method comprising the steps of:

a) transmitting a carrier signal of a predetermined frequency from an RFID reader;

b) determining whether an amplitude of the transmitted carrier signal is modulated;

c) transmitting a first gap signal;

d) determining whether a tag responsive to a reader signal is within a tag read range;

e) reading an initial response of a card;

f) if the tag is not within the tag read range, repeating steps c and d;

g) if the tag exist within the tag read range, determining whether the initial response of the card read leads to data collision;

h) if the initial response leads to data collision, repeating steps c through f;

i) if the initial response does not lead to data collision, reading the data stored at a memory of the tag with a predetermined protocol;

j) verifying format of the read data;

k) if the verified format is not valid, repeating steps i and j;

l) if the verified format is valid, generating a second gap signal to notify that data transfer is complete and then repeating steps d through j.

5.   The method as recited in claim 4, wherein the carrier signal is determined by electromagnetic field strength defining the tag read range.

6.   The method as recited in claim 4, wherein a period of the second gap signal is shorter than that of the first gap signal.